Book review: Thomas Söderquist (ed.), The History and Poetics of Scientific Biography (Aldershot: Ashgate, 2007)

into seven chapters, appended with primary documents, an extensive bibliography, a glossary, and a chronology, Suzanne Le-May Sheffield admirably covers more than five centuries of history and condenses a sizable secondary literature into slightly more than two hundred pages of text. The result is a significant pedagogical contribution to the discipline, long overdue.

Sheffield deftly draws readers into her narrative with an introduction focused on the life and career of Marie Curie. By presenting Curie as both standard-bearer and everywoman, the introduction sets up many of the ironies and struggles of women in the history of science. Chapter 1 begins chronologically with the early modern period, relying most heavily on the work of Carolyn Merchant and Londa Schiebinger. This chapter strikes a nice balance between discussing scientific ideas about women in the Scientific Revolution and acknowledging notable women, like Maria Winkelmann and Laura Bassi, who found their own paths into the scientific establishment. Less effective is Sheffield's second chapter, which attempts to cover sexual science from the eighteenth century to the present while also highlighting strategies used to combat notions of biological inferiority and natural limitations. The thematic approach of this chapter causes the reader to lose track of chronology and the historical context of each period, which is especially important for an undergraduate audience.

Women and Science is at its strongest in Chapters 3, 4, and 5, which follow the advancement of women from amateurs to professionals and from autodidacts to holders of advanced degrees. In particular, Sheffield excels at placing many of Margaret Rossiter's "struggles and strategies" from *Women Scientists in America* (Johns Hopkins, 1982) into a comparative international context. These comparisons are useful for prompting class discussions and highlighting the historical contingencies of women's entry into scientific higher education and professions. Why, for instance, was home economics so much more popular in the United States than in Britain? Why were some fields of science "feminine" in one national context and "masculine" in another?

The last two chapters of *Women and Science* bring the historical narrative up to the present, highlighting attempts to attain a critical mass of women in the sciences since World War II. In these chapters Sheffield also surveys feminist critiques of science and the cultural and institutional barriers that still exist for women pursuing careers in science. At times, she oversimplifies and overgeneralizes what are still challenging and complex issues in the philosophy of science, and some undergraduates may find the polemical tone of the last chapter off-putting. Instead, Sheffield's narrative could have been significantly strengthened by more in-depth coverage of the experiences of minority women in the sciences and how they have confronted discrimination based on both sex and race.

Readers of *Isis* will not find another text on women, gender, and science that is as broad in scope and that offers an all-in-one source of primary and secondary material. The chronology and bibliography alone make the book a valuable resource, and *Women and Science* is sure to find its way into the curriculum as a standard text.

SUSAN RENSING

Thomas Söderqvist (Editor). *The History and Poetics of Scientific Biography*. (Science, Technology, and Culture, 1700–1945.) xv + 286 pp., figs., tables, index. Aldershot: Ashgate, 2007. $99.95 (cloth).

In this rich and absorbing collection of essays, dedicated to showing the historiographical interest and value of biographical studies, two sets of enemies to biography emerge. The first are academic publishers who summarily reject biographies, evidently on the grounds that they do not sell. This brings us to the second enemy, academic historians—much like most of you reading this—who refuse to buy biographies and generally "despise and reject" them, as the editor, echoing Isaiah, laments (pp. 186, 257). Even the brief preface, supplied by David Knight (the general editor of the series in which the book appears), tells a tale of how his own attempts to run a series of scientific biographies foundered after a few years, as two successive publishers (Blackwell's and Cambridge University Press, no less) lost interest.

As the defensive purpose of the book became apparent to me, I realized that *Isis* had unfortunately picked the wrong reviewer. The Book Review Editor couldn't have known that I am (evidently) one of the few academic historians of science who actually like biographies. To be sure, there are bad biographies; but even the less successful biographers tend to rely on empirical research and take it for granted that trying to place the subject in historical context is paramount. This is surely better than the increasing revival of presentism in other kinds of studies, where present-day fads and concerns with "performativity" or "obligatory points of passage,"

say, are foisted onto the past by a bit of "creative" historiography. I find it hard to understand what the objections to biographies are, and I shall be looking for other reviews of this book—some of which must surely be written by those academics who despise biographies—in the hope of discovering why it is that I am supposed to scorn and revile them.

At the risk of addressing those who are unwilling to listen, *The History and Poetics of Scientific Biography* provides an interesting variety of approaches to the task of showing the value of biographies. After Thomas Söderqvist's apologetic introduction offering a reassessment of the genre of biography on historiographical and methodological grounds, Liba Taub, using the example of Pythagoras, shows how ancient accounts of great lives were presented not so much as biographies but as guides to living one's own life. The continuing importance of the moral dimension of scientific biography features not only in Stephen Gaukroger's fresh approach to his own ongoing work on the changing persona of the natural philosopher in the early modern period (using the examples of Bacon and Descartes), but also in Christopher A. J. Chilvers's fascinating account of the Russian physicist and social historian of science Boris Hessen. David Aubin and Charlotte Bigg offer reflections on what they call the "genius versus context" dichotomy, and what they see as the "obliteration of the problem of individual agency" (p. 54), by considering the self-fashioning of Norman Lockyer and Jules Janssen, simultaneous pioneers in the development of solar spectroscopy. Patricia Fara offers suggestions as to how portraits might be used to understand the historical subject, while Thomas L. Hankins examines how the reward system in science shapes careers and thereby plays a role in biography. Helge Kragh, Signe Lindskov Hansen, and Rebekah Higgitt each look at successive biographies of a particular thinker (Pierre Gassendi, Niels Stensen, and Newton, respectively), and it is hard (for me, anyway) to imagine how anyone interested in the writing of history could fail to find salutary lessons in any one of them. Similarly, Bernadette Bensaude-Vincent's meditation on how the biography turns collective memory into history, and then feeds back into collective memory, is wonderfully thought provoking. Rena Selya discusses the problems of using autobiographies in the writing of the history of science, while Jacalyn Duffin and Vassiliki Betty Smocovitis offer their own autobiographical accounts of their work as biographers—in the latter case, as the biographer of a subject who was still alive at the time the biography went to press. Duffin gives a vivid account of how lucky she was to get her two biographies (on Laennec and the less well known James Miles Langstaff) accepted for publication in the prevailing "academic" climate. The book ends with two historiographical pieces: Beth Linker's essay on the use of biography in the history of medicine; and the parting shot by the editor, in which Söderqvist makes an eloquent plea for the importance of biography.

It seems to me that any thoughtful historian reading this collection, or even merely dipping into it, could hardly fail to recognize the value of biographical studies for the history of science (or indeed for history more generally). Having said that, however, I am all too aware that before I read this book I was laboring under the misconception that no historians worth their salt needed to be persuaded of this.

JOHN HENRY

Rudolf Werner Soukup. *Chemie in Österreich: Bergbau, Alchemie, und frühe Chemie: Von den Anfängen bis zum Ende des 18. Jahrhunderts.* (Beiträge zur Wissenschaftsgeschichte und Wissenschaftsforschung, 7.) xviii + 623 pp., illus., apps., bibl., index. Vienna: Böhlau, 2007. €65 (cloth).

Rudolf Werner Soukup was a professional chemist before making the history of chemistry his primary research focus. He is now lector of the history of chemistry at the Institut für Chemische Technologien und Analytik, Vienna. Soukup's first monograph in the field, *Alchemistisches Gold—Paracelsistische Pharmaka: Laboratoriumspraxis im 16. Jahrhundert: Chemiegeschichtliche und archäometrische Untersuchungen am Inventar des Laboratoriums von Kirchberg am Wagram/Oberstockstall* (Böhlau, 1997), showcased his ability to synthesize the approaches of chemistry, archaeology, and history to explain the objects, metallurgical processes, and pharmaceutical recipes of a sixteenth-century laboratory in Lower Austria. The present work is equally eclectic, but here Soukup purports to cover mining, metallurgy, alchemy, chemistry, and pharmacology in Austria and neighboring territories from prehistoric times to roughly 1780 (one additional subtitle reads "Geschichte der frühen chemischen Technologie und Alchemie des ostalpinen Raumes unter Berücksichtigung von Entwicklungen in angrenzenden Regionen"). The central claim, which echoes existing German literature on mining and alchemy (Helmut Wilsdorf, Wolfgang Schneider, Lothar Suhling), is that the technologies and interests of mining and assaying gave birth to analytical